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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/080,931

Applicant(s)

CHHABRA ET AL.

Examiner

Trenton J. Roche

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is responsive to the petition to revive under 37 CFR 1.137(b), filed 6 April 2007, of which was granted 23 May 2007.
2. Per Applicants' request, amended claims 1, 12, 15, 19 and 20 have been entered. Claims 1-23 are currently pending.
3. Claims 1-23 have been examined.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication 2003/0182414 A1 to O'Neill in view of U.S. Patent 6,009,524 to Olarig et al., hereafter referred to as Olarig.

Per claim 1:

O'Neill discloses:

- a remote upgrade method (Note Figure 2A and the corresponding sections of the disclosure)
- performing a power up boot process ("During device startup, code execution typically begins at a specific startup address...this address refers to a section of the boot block...where the update agent resides" in paragraph 0125)

- monitoring for an indication of available update information remotely, said indication of available upgrade information from a source of said available upgrade information (“to determine which client devices...require updating and if any updates are available” in paragraph 0051. Further, “[t]he collector may additionally acquire the necessary updates and . . . distribute them to the client devices” in paragraph 0051. The server array and collector are remote to the client systems, and as the collector can acquire and distribute the updates to the clients, it is a source of available upgrade information for the clients.)
- engaging in an update setup process automatically in which an upgrade indication variable is set to indicate an upgrade is required when said indication of available update information is received (“The update server array 122 may further automatically transfer the update package 110 to the client device 104 without a request from the client device...” in paragraph 0046. Further, “the idle status flag stored in the status table...is updated to indicate that the electronic device is ready to proceed into an upgrade mode” in paragraph 0143)
- said upgrade indication variable continues to indicate an upgrade is required until an upgrade is successfully completed (“When the update agent determines the update process to be complete...the status flag contained in the status table...is updated to reflect an idle state where no update operations are pending” in paragraph 0152)
- an update reboot process is executed (“Thereafter, the electronic device is rebooted...” in paragraph 0143)

substantially as claimed. O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known (“the BIOS image...can be updated by a software update” in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 2:

The rejection of claim 1 is incorporated, and further, O'Neill discloses booting up an operating system and launching an update application as claimed ("The update agent comprises an embedded function component that is desirably stored in the boot sector...During routine operation of the electronic device the update agent may remain inactive, allowing the device's operating system to perform function calls..." in paragraph 0118. Further, "The download agent is responsible for performing operations related to communicating with the update servers and retrieving available update packages..." in paragraph 0120)

Per claim 3:

The rejection of claim 2 is incorporated, and further, O'Neill discloses the update application being a TCP/IP application as claimed ("the download agent is responsible for performing operations related to communicating with the update servers..." in paragraph 0120. Further, "Viable communications media may include...the Internet" in paragraph 0040.)

Per claim 4:

The rejection of claim 3 is incorporated, and further, O'Neill discloses the socket application waiting for a request to engage in an update process, wherein said request is from a management station that

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is accessible via the internet (“to determine which client devices...require updating and if any updates are available...and...distribute them to the client devices...” in paragraph 0051. As was shown in the rejection of claim 3, the download agent handles all internet communications.)

Per claim 5:

The rejection of claim 1 is incorporated, and further, O'Neill discloses an update request message being received and having an indication of an updated information location as claimed (“to determine which client devices...require updating and if any updates are available...and...distribute them to the client devices...” in paragraph 0051. As was shown in the rejection of claim 3, the download agent handles all internet communications. Therefore, to download the update, the download agent inherently receives location information for the update from the server.) O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known (“the BIOS image...can be updated by a software update” in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 6:

The rejection of claim 5 is incorporated, and further, O'Neill discloses an IP address of a management station and a name of an updated file comprising updated information stored on said management station as claimed (“the update packages can be downloaded from the device servers

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directly by client/server communications...” in paragraph 0052. As was shown in the rejection of claim 3, the download agent handles all internet communications. Therefore, to download the update, the download agent inherently is provided an IP address and a name of the update file.) O’Neill does not explicitly disclose the updated file being a boot file. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known (“the BIOS image...can be updated by a software update” in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O’Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O’Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 7:

The rejection of claim 5 is incorporated, and further, O’Neill discloses storing information indicating the location of updated information as claimed (“the client device may proceed to check for additional updates...the update installation process may be repeated periodically as needed or desired for additional update queries” in paragraph 0067. To repeatedly check, the location information must be stored with the client device.) O’Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known (“the BIOS image...can be updated by a software update” in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O’Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of

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the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 8:

The rejection of claim 5 is incorporated, and further, O'Neill discloses storing values for update for an update location variable and an update information file variable in a flash read only memory (ROM) as claimed ("non-volatile memory...that desirably maintain information...exemplary components...may include...EPROM devices" in paragraph 0116)

Per claim 9:

The rejection of claim 1 is incorporated, and further, O'Neill discloses entering an update mode and retrieving updated information from a central management station as claimed ("the idle status flag stored in the status table...is updated to indicate that the electronic device is ready to proceed into an upgrade mode" in paragraph 0143)

Per claim 10:

The rejection of claim 1 is incorporated, and further, O'Neill discloses a boot loader routine reading an upgrade indication variable ("the idle status flag stored in the status table...is updated to indicate that the electronic device is ready to proceed into an upgrade mode" in paragraph 0143) and repeatedly downloading updated information until said upgrade indication variable indicates there is no pending update download required as claimed ("When the update agent determines the update process to be complete...the status flag contained in the status table...is updated to reflect an idle state where no update operations are pending" in paragraph 0152. Further, if an error is found in the

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code, “the process can find a point from which to resume...during the update process” in paragraph 0149)

Per claim 11:

The rejection of claim 1 is incorporated, and further, O'Neill discloses the upgrade indication variable being changed to indicate no pending update download is required when a download is verified and authenticated as claimed (“When the update agent determines the update process to be complete...the status flag contained in the status table...is updated to reflect an idle state where no update operations are pending” in paragraph 0152. Further, the update code is validated by a CRC as shown in paragraph 0140.)

Per claim 12:

O'Neill discloses:

- an update reboot process (Note Figure 2A and the corresponding sections of the disclosure. Further, “Thereafter, the electronic device is rebooted...” in paragraph 0143)
- checking a pending update indication remotely, said pending update indication from a source of update information (“to determine which client devices...require updating and if any updates are available” in paragraph 0051. Further, “[t]he collector may additionally acquire the necessary updates and . . . distribute them to the client devices” in paragraph 0051. The server array and collector are remote to the client systems, and as the collector can acquire and distribute the updates to the clients, it is a source of available upgrade information for the clients.)

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- retrieving update location information (Note Figure 2B, item 258 and the corresponding sections of the disclosure)
- downloading update information automatically (“The update server array 122 may further automatically transfer the update package 110 to the client device 104 without a request from the client device...” in paragraph 0046)
- determining if a download occurred successfully (“validation checks are implemented to insure that the package is complete...” in paragraph 0140)
- setting a pending update indication to indicate there is no pending update (“When the update agent determines the update process to be complete...the status flag contained in the status table...is updated to reflect an idle state where no update operations are pending” in paragraph 0152)
- completing a boot sequence (“Thereafter, the electronic device is rebooted...” in paragraph 0143)

substantially as claimed. O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known (“the BIOS image...can be updated by a software update” in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 13:

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The rejection of claim 12 is incorporated, and further, O'Neill discloses a boot loader routine reading an upgrade indication variable ("the idle status flag stored in the status table...is updated to indicate that the electronic device is ready to proceed into an upgrade mode" in paragraph 0143)

Per claim 14:

The rejection of claim 12 is incorporated, and further, O'Neill discloses a management station identifier and update information file name variables being read as claimed ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052. As was shown in the rejection of claim 3, the download agent handles all internet communications. Therefore, to download the update from the update server, the download agent is inherently provided a management station identifier and an update information file name.)

Per claim 15:

The rejection of claim 12 is incorporated, and further, O'Neill discloses a connection being made to an indicated management station and information from an update information file is retrieved and stored in a flash read only memory as claimed ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052. Further, "non-volatile memory...that desirably maintain information...exemplary components...may include...EPROM devices" in paragraph 0116)

Per claim 16:

The rejection of claim 12 is incorporated, and further, O'Neill discloses the received updated information being authenticated as claimed ("(CRC) for the received update package..." in

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paragraph 0140). O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known ("the BIOS image...can be updated by a software update" in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 17:

The rejection of claim 12 is incorporated, and further, O'Neill an authentication mechanism that prevents loading of "illegal" images and corrupted images ("Viable communications media may include...the Internet" in paragraph 0040. Further, "(CRC) for the received update package..." in paragraph 0140. The CRC check prevents corrupted or otherwise illegally operated programs from executing.). O'Neill does not explicitly disclose the authentication being a public key. Olarig discloses in an analogous network updating system that the use of public and private keys was well known for ensuring that upgrades are valid and legal ("using the stored public keys, to ensure that the upgrade is valid and authorized..." in col. 4 lines 17-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the public key authorization method of Olarig with the upgrade downloading system of O'Neill, as this would help ensure that the upgrade is valid and authorized to be loaded into system memory, as disclosed in col. 4 lines 16-25 of Olarig.

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Per claim 18:

The rejection of claim 12 is incorporated, and further, O'Neill discloses an update application setting an upgrade indication variable to indicate no update is required and awaiting future requests for update downloads as claimed ("When the update agent determines the update process to be complete...the status flag contained in the status table...is updated to reflect an idle state where no update operations are pending" in paragraph 0152)

Per claim 19:

O'Neill discloses:

- an information upgrade method (Note Figure 2A and the corresponding sections of the disclosure.)
- executing an update management center process (Note Figure 1C, item 134 and the corresponding sections of the disclosure)
- initiating contact with target devices wherein the contact with said target devices indicates there is updated information ("to determine which client devices...require updating and if any updates are available" in paragraph 0051. Further, "[t]he collector may additionally acquire the necessary updates and . . . distribute them to the client devices" in paragraph 0051. The server array and collector are remote to the client systems, and as the collector can acquire and distribute the updates to the clients, it is a source of available upgrade information for the clients.)
- performing an update setup process automatically which sets up the target device configuration to prepare for receiving updated information ("The update server array 122

may further automatically transfer the update package 110 to the client device 104 without a request from the client device..." in paragraph 0046)

- including tracking information identifying a location of updated information ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052. As was shown in the rejection of claim 3, the download agent handles all internet communications. Therefore, to download the update from the update server, the download agent is inherently provided with the location of the updated information.)
- and setting a pending update indication variable appropriately to indicate update information is available and has not been successfully obtained ("the idle status flag stored in the status table...is updated to indicate that the electronic device is ready to proceed into an upgrade mode" in paragraph 0143)
- executing an update download process, including downloading updated information from the update management center ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052)
- storing it in a read only memory (ROM) ("non-volatile memory...that desirably maintain information...exemplary components...may include...EPROM devices" in paragraph 0116)
- said update boot information download process repeats itself until a download is successfully completed ("the process can find a point from which to resume...during the update process" in paragraph 0149)
- performing a reboot sequence utilizing the updated information and continuing with normal operations ("Thereafter, the electronic device is rebooted..." in paragraph 0143)

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substantially as claimed. O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known ("the BIOS image...can be updated by a software update" in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 20:

The rejection of claim 19 is incorporated, and further, O'Neill discloses creating updated information at a centralized location (Note Figure 1C and the corresponding sections of the disclosure), initiating contact with target devices wherein the contact with said target devices indicates there is updated information ("to determine which client devices...require updating and if any updates are available" in paragraph 0051), and forwarding updated information which is loaded onto said target device as claimed ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052). O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known ("the BIOS image...can be updated by a software update" in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user

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to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 21:

The rejection of claim 20 is incorporated, and further, O'Neill discloses initiating contact with said target device, wherein the contact includes information necessary to access the updated information, requesting said target device to receive updated information, and monitoring for requests to download information as claimed ("the update management component references the desired update package and directs the update device server to establish a communication link with the client device to transfer the desired update package to the client device" in paragraph 0057). O'Neill does not explicitly disclose the download information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known ("the BIOS image...can be updated by a software update" in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 22:

The rejection of claim 20 is incorporated, and further, O'Neill discloses an internet protocol (IP) address of the central management station and a file name of a file comprising updated information as claimed ("the update packages can be downloaded from the device servers directly by client/server communications..." in paragraph 0052. As was shown in the rejection of claim 3, the

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download agent handles all internet communications. Therefore, to download the update, the download agent inherently is provided an IP address and a name of the update file.). O'Neill does not explicitly disclose the updated information being boot information. Olarig discloses in an analogous networked updating system that the ability to update boot information was well known ("the BIOS image...can be updated by a software update" in col. 1 lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the update information of O'Neill include boot (BIOS) update information as disclosed in Olarig, as this would enable a user to update the boot process of the system disclosed by O'Neill to keep consistent with rapidly changing technologies, as disclosed in col. 1 lines 18-33 of Olarig.

Per claim 23:

The rejection of claim 20 is incorporated, and further, O'Neill discloses the update information being forwarded via the internet with authentication as claimed ("Viable communications media may include...the Internet" in paragraph 0040. Further, "(CRC) for the received update package..." in paragraph 0140). O'Neill does not explicitly disclose the authentication being a public key. Olarig discloses in an analogous network updating system that the use of public and private keys was well known for ensuring that upgrades are valid and legal ("using the stored public keys, to ensure that the upgrade is valid and authorized..." in col. 4 lines 17-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the public key authorization method of Olarig with the upgrade downloading system of O'Neill, as this would help ensure that the upgrade is valid and authorized to be loaded into system memory, as disclosed in col. 4 lines 16-25 of Olarig.

Response to Arguments

6. Applicant's arguments filed 6 April 2007 have been fully considered but they are not persuasive.

Per claims 1, 12 and 19:

Applicants state that neither O'Neill nor Olarig, taken alone or in combination, teach or reasonably suggest the newly added limitations regarding the indication of available upgrade information coming from a source of said available upgrade information. In response, the Examiner notes that O'Neill discloses in paragraph 0051 that the collector is capable of monitoring for an indication that an update is required ("collector may communicate with . . . the one or more client devices . . . to determine which client devices . . . require updating" in paragraph 0051). Further, "[t]he collector may additionally acquire the necessary updates and . . . distribute them to the client devices" in paragraph 0051. Accordingly, the collector can be a source of available upgrade information for the clients, and as the collector provides the indication that there is available upgrade information for the client devices, O'Neill is interpreted to meet the required claim limitations. The rejection is proper and maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trenton J. Roche whose telephone number is (571) 272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trenton J Roche
Examiner
Art Unit 2193

TJR



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